

## **AMENDMENTS TO THE CLAIMS**

1. (Original) A control method for an arc welding apparatus comprising the steps of:
    - detecting welding voltage;
    - calculating a change amount of the welding voltage; and
    - detecting neck of a droplet by the change amount of the welding voltage and a second threshold,
      - wherein based on a result of comparison between the change amount of the welding voltage and a first threshold, detecting the neck of the droplet by the change amount of the welding voltage and the second threshold is prohibited for a predetermined period.
  2. (Original) The control method for an arc welding apparatus of claim 1, wherein the first threshold is a negative threshold for preventing wrong detection of the neck of the droplet, the second threshold is a positive threshold for detecting the neck of the droplet, and when the change amount of the welding voltage is smaller than the first threshold, the detection of the neck of the droplet by the second threshold and the change amount of the welding voltage is prohibited for a predetermined period.
  3. (Original) The control method for an arc welding apparatus of claim 2, wherein when the change amount of the welding voltage becomes smaller than the first threshold again during the predetermined period in which the detection of the neck is prohibited, for a predetermined period from the point of time, the detection of the neck of the droplet by the second threshold and the change amount of the welding voltage is prohibited.
- 4-7. (Cancelled)
8. (Original) An arc welding apparatus comprising:
    - a voltage detector for detecting welding voltage;
    - a voltage change amount detection part for calculating a change amount of the welding voltage detected by the voltage detector; and

a comparison part for comparing a first threshold and/or a second threshold with a calculation result of the voltage change amount detection part,

wherein based on a result of comparison between the first threshold and a calculation result of the voltage change amount detection part, detection of neck of a droplet by the second threshold and a calculation result of the voltage change amount detection part is prohibited for a predetermined period.

9. (Original) The arc welding apparatus of claim 8, wherein the first threshold is a negative threshold for preventing wrong detection of the neck of the droplet, the second threshold is a positive threshold for detecting the neck of the droplet, and when the calculation result of the voltage change amount detection part is smaller than the first threshold, the detection of the neck by the second threshold and the calculation result of the voltage change amount detection part is prohibited for a predetermined period.

10. (Original) The arc welding apparatus of claim 9, wherein when the calculation result of the voltage change amount detection part becomes smaller than the first threshold again during the predetermined period in which the detection of the neck is prohibited, for a predetermined period from the point of time, the detection of the neck of the droplet by the second threshold and the calculation result of the voltage change amount detection part is prohibited.

11-14. (Cancelled)